

Appl. No. 09/823,127
Amdt. Dated February 26, 2007
Reply to Office Action of December 15, 2006

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REMARKS/ARGUMENTS

This Amendment is in response to the Office Action mailed December 15, 2006. In the Office Action, claims 1-28 were rejected under 35 U.S.C. §103. Applicant has amended claims 1, 9, 16, and 21 to clarify the claim language. Reconsideration in light of the amendments and remarks made herein is respectfully requested.

Responses to the Examiner's arguments

In the Office Action, the Examiner contends that the Applicant readily admits that there is a frame fragmentation control information at the end of the subframe or data segment and White does disclose this limitation since the claim does not specifically require that the data segment not have any other information added to it (Office Action, page 3, lines 3-8). Applicant respectfully disagrees. As argued in the previous response, White specifically discloses a first fragmentation header 150 which includes a field indicating that the first subframe 140 is the initial subframe in the sequence (White, paragraph [0045]). Since a header, by definition and as shown in Figure 7A, is at the beginning of the subframe (See, White, Figure 7A), not at the end, the frame indicator, which is part of the header 150, is at the beginning of the subframe. In contrast, claims 1, 9, 16, and 21 specifically recite that the first frame control information, which includes the first frame fragmentation indicator, is appended to end of the first data segment. To clarify that this aspect of the invention, claims 1, 9, 16, and 21 have been amended.

Applicant also notes that the White specifically discloses a first fragmentation trailer 152 does not contain the first frame segmentation indicator. It only contains an octet to indicate if the subframe is the final (or the last) subframe. The mere fact that White specifically separates into the header and the trailer indicates that White does not disclose or suggest appending the frame indicator at the end of the subframe.

Rejection Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 1-28 under 35 U.S.C. §103(a) as being unpatentable over U.S. Publication No. 2002/0150100A1 issued to White ("White") in view of U.S. Patent No. 5,828,835 issued to Isfeld ("Isfeld"). Applicant respectfully traverses the

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rejection and submits that the Examiner has not met the burden of establishing a *prima facie* case of obviousness.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations: *MPEP* §2143, p. 2100-129 (8th Ed., Rev. 2, May 2004). Applicants respectfully submit that there is no suggestion or motivation to combine their teachings, and thus no *prima facie* case of obviousness has been established.

White discloses a method and apparatus for adaptive frame fragmentation. Upon an arrival of another communication frame within a higher priority queue, the communication frame is segmented into a first subframe and a second subframe (White, paragraph [0044]). The first subframe includes identifying fields in the form of a first fragmentation header and a first fragmentation trailer (White, paragraph [0044]).

Isfeld discloses a high throughput message passing process using latency and reliability classes. A receive buffer has one receive list indicating data needing normal-priority attention and another receive list indicating data needing high-priority attention (Isfeld, col. 27, lines 49-54). The receive list bit definition includes bits 10 through 15 to determine the channel over which the IOP received the message (Isfeld, col. 28, lines 9-11).

White and Isfeld, taken alone or in any combination, do not disclose, suggest, or render obvious, at least one of (1) a first frame fragmentation control information appended to end of the first data segment, and (2) the first frame fragmentation control information including at least (i) a first frame fragmentation indicator to indicate if the first frame fragment is a first fragment generated from the frame, (ii) a frame fragment sequence number specifying a sequential order number assigned to the first frame segment, and (iii) a channel number, as recited in claim 1; or (1) a frame fragmentation control information appended to end of the payload data to enable the frame fragments to be reassembled into the frame, and (2) the frame fragmentation control information including at least two of (i) a first frame fragmentation indicator to indicate if the first frame fragment is a first fragment generated from the frame, (ii) a frame fragment sequence

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number, and (iii) a channel number, as recited in claim 9; or (1) a frame fragmentation control information appended to end of the payload data to enable the frame fragments to be reassembled into the frame, and (2) the frame fragmentation control information including a first frame fragmentation indicator to specify whether a frame fragment is a first fragment generated from the frame, as recited in claim 16; or (1) a first frame fragmentation control information appended to end of the first data segment, and (2) the first frame fragmentation control information including at least a frame fragmentation indicator to indicate if the first frame fragment is a first fragment generated from the frame and a frame fragment sequence number to specify a sequential order number assigned to the first frame fragment generated from the low priority frame, as recited in claim 21.

White merely discloses a subframe including a fragmentation header and a fragmentation trailer (White, paragraph [0045]), not a frame fragmentation control information. The fragmentation header is at the beginning of the subframe, not appended to end of the data segment. Therefore, to transmit a subframe, White's teaching requires that two separate sets of information to be included in the subframe: a header at the beginning and a trailer at the end. The header contains a field indicating that the first subframe 140 is the initial subframe in the sequence (White, paragraph [0045]). The header is at the beginning of a subframe. In contrast, the claimed invention provides for a first frame fragment indicator to be appended at the end of the data segment or the payload data. To clarify this aspect of the invention, claims 1, 9, 16, and 21 have been amended.

In addition, the fragmentation trailer at the end of the subframe merely contains a parameter F which indicates whether the associated subframe is the final subframe (White, paragraph [0047]), not including at least one, or two, of (i) a first frame fragmentation indicator, (ii) a frame fragment sequence number specifying a sequential order number assigned to the first frame segment, and (iii) a channel number.

Isfeld merely discloses a free list in a receive buffer (Isfeld, col. 27, lines 33-37), not a sending unit. Furthermore, Isfeld merely disclose bits to determines the channel over which the message is received (Isfeld, col. 28, lines 9-11; col. 29, lines 24-25), not transmitted. Accordingly, Isfeld effectively teaches away from the claimed invention.

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In addition, neither White nor Isfeld discloses, suggests, or renders obvious an extension indicator as recited in claims 8, 15, 20, and 28. The seven least significant bits in the fragmentation trailer 180 are used to ensure all fragment trailers are distinguished from all fragment headers and other framing headers (White, paragraph [0047]), not used to extend or add fields to the frame fragment control information as performed by the extension indicator. The formats of the fragmentation header and trailer are fixed (White, Figures 8 and 9; paragraphs [0046]-[0047]). Therefore, they cannot be extended to include additional fields. Similarly, Isfeld merely discloses 4 bits to be appended to the top 28 bits to create the message address for all transfers (Isfeld, col. 25, lines 32-35), not to extend or add additional fields.

There is no motivation to combine White and Isfeld because neither of them addresses the problem of efficient transmission of prioritized data. There is no teaching or suggestion that appending frame fragmentation control at end of a data segment or payload data is present. White, read as a whole, does not suggest the desirability of appending only the fragmentation control and a channel number. For the above reasons, the rejection under 35 U.S.C. §103(a) is improperly made.

The Examiner failed to establish a prima facie case of obviousness. When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to: (A) The claimed invention must be considered as a whole; (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination; (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and (D) Reasonable expectation of success is the standard with which obviousness is determined. Hodosh v. Block Drug Co., Inc., 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986). "When determining the patentability of a claimed invention which combined two known elements, 'the question is whether there is something in the prior art as a whole suggest the desirability, and thus the obviousness, of making the combination.'" In re Beattie, 974 F.2d 1309, 1312 (Fed. Cir. 1992), 24 USPQ2d 1040; Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 1462, 221 USPQ (BNA) 481, 488 (Fed. Cir. 1984). To defeat patentability based on obviousness, the suggestion to make the new product having the claimed characteristics must come from the prior art, not from the hindsight knowledge of the invention. Interconnect Planning Corp. v. Feil, 744 F.2d 1132, 1143, 227

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USPQ (BNA) 543, 551 (Fed. Cir. 1985). To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the Examiner to show a motivation to combine the references that create the case of obviousness. In other words, the Examiner must show reasons that a skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the prior elements from the cited prior references for combination in the manner claimed. In re Rouffet, 149 F.3d 1350 (Fed. Cir. 1996), 47 USPQ 2d (BNA) 1453. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or implicitly suggest the claimed invention or the Examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." Ex parte Clapp, 227 USPQ 972, 973. (Bd. Pat. App. & Inter. 1985). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Furthermore, although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." In re Mills 916 F.2d at 682, 16 USPQ2d at 1432; In re Fritch, 972 F.2d 1260 (Fed. Cir. 1992), 23 USPQ2d 1780.

In the present invention, the cited references do not expressly or implicitly suggest any of the above elements. In addition, the Examiner failed to present a convincing line of reasoning as to why a combination of White and Isfeld is an obvious application of appending fragmentation control information at end of data segments.

Therefore, Applicant believes that independent claims 1, 9, 16 and 21 and their respective dependent claims are distinguishable over the cited prior art references. Accordingly, Applicant respectfully requests the rejection under 35 U.S.C. §103(a) be withdrawn.

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Conclusion

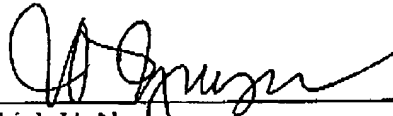
Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: February 26, 2007

By


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Tu Nguyen

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